



WORKING PAPER

**MEETING OF THE METEOROLOGY PANEL (METP)
METEOROLOGICAL INFORMATION AND SERVICE
DEVELOPMENT WORKING GROUP (WG-MISD)**

FIRST MEETING

Washington DC, United States, 16 to 19 November 2015

- Agenda Item 3: Regional Hazardous Weather Advisory Centres (RHWAC) Work Stream**
**3.1: Status report on activities within the work plan for the RHWAC Work Stream
and drafting of ConOps**

**PROPOSED OUTLINE OF THE CONCEPT OF OPERATIONS (CONOPS) AND INITIAL
DRAFT FUNCTIONAL REQUIREMENTS ON THE REGIONAL HAZARDOUS WEATHER
ADVISORY SYSTEM (RHWAS)**

(Presented by Sharon Lau Sum Yee)

SUMMARY

This working paper presents the proposed outline of the Concept of Operations (ConOps) and initial draft functional requirements on Regional Hazardous Weather Advisory System. Action by the METP-WG/MISD is in paragraph 3.1.

Action by the METP-WG/MISD RHWAC Work Stream is in paragraph 3.

1. INTRODUCTION

1.1 Long-standing deficiencies in the reporting and forecasting of en-route hazardous meteorological conditions have persisted for many years in some Regions. In addition to this the aviation industry has identified a need for a phenomenon-based system to provide advice on hazardous weather. To address these issues the Meteorology Divisional Meeting in 2014 (MET14) formulated the following recommendation:

Recommendation 2/9 - Implementation of a regional advisory system for select en-route hazardous meteorological conditions

That an appropriate ICAO expert group, in close coordination with WMO, be tasked to:

- a) expeditiously develop provisions supporting the implementation of a phenomenon-based regional advisory system for select en-route hazardous meteorological conditions consistent with the *Global Air Navigation Plan* (Doc 9750), in considering users' long-standing

- requirements, especially in those States where notable SIGMET-related deficiencies persist using, as appropriate, the strategic, governance and cost recovery assessments provided in Appendices D and E;
- b) integrate the information produced by the referred system into the future system-wide information management environment underpinning the future globally interoperable air traffic management system; and
 - c) develop appropriate guidance material to support the selection criteria of regional hazardous weather advisory centres taking account of cost-effectiveness, the processes for the preparation and dissemination of the advisory information, mutual cooperation, sustainability of the existing meteorological infrastructure and use of local expertise.

Note:- Select hazardous meteorological conditions in this context included: as a minimum, thunderstorms, icing, turbulence and mountain waves, but excludes volcanic ash and tropical cyclones.

1.2 In response the MET14 recommendation 2/9, the Meteorology Panel (METP) developed a Job Card for 'Implementation of a regional advisory system for select en-route hazardous meteorological conditions' (refer to Job Card in the METP Report) to increase safety and efficiency by keeping aircraft operations out of areas of hazardous meteorological conditions. With reference to MET/14 Recommendation 2/9a, there is a requirement to develop the provisions supporting the implementation of a phenomenon-based regional advisory system. Based on teleconference discussions of the RHWAC Work Stream, the provisions will be supported by: (a) Concept of Operations (ConOps) document; and (b) guidance material on governance and cost recovery issues to be developed). This paper pertains only to item (a).

2. DISCUSSION

2.1 Appendix A to this working paper provides the draft outline of the ConOps on Regional Hazardous Weather Advisory System (RHWAS). This is a slightly modified version from the proposed ConOps outline developed by the Chair of MISD. As MET14, after considering a draft ConOps on RHWAC and strategic assessment prepared by the ICAO METWSG, agreed on a phased-approach to the implementation of phenomenon-based regional advisory system, explicitly highlighting the “whom” (RHWACs) and “how” (e.g. provision of advisories to assist MWOs with the existing provision of SIGMET, followed by centralization of related responsibilities to RHWACs) aspects, the “whom” and “how” aspects are recommended to be covered in the ConOps.

2.2 Appendix B to this working paper is a very first draft of the information flow after the introduction of RHWACs and the new/revised functional requirements of RHWAC, its associated MWOs, as well as other stakeholders. Based on the functional requirements, the performance requirements would be developed. These requirements would then form the basis of chapter 3 of the ConOps.

2.3 A list of items is given in Appendix C to facilitate the discussion to advance on a number of issues. Deliberation of this meeting and comments subsequently received would be considered in the drafting of the ConOps.

2.4 The meeting is invited to formulate the following draft Conclusion:

Conclusion (MISD-RHWAC)/1/xx ConOps of Regional Hazardous Weather Advisory Centres (RHWAC)

That the MISD, supported by the RHWAC Work Stream, finalise the ConOps of RHWAS by June 2016 and present the ConOps to the Second Meeting of the Meteorology Panel (scheduled to be held in October 2016) for endorsement.

3. ACTION BY THE METP-WG/MISD RHWAC WORK STREAM

3.1 The METP-WG/MISD RHWAC Work Stream is invited to:

- a) note the information contained in this working paper, and
- b) decide on the draft conclusion for the group's consideration.

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